Aug. 13, 1968 G. V. WHEELER 3,396,872

POWDER DISPENSER FOR PRINTED WEBS

Filed April 20, 1966

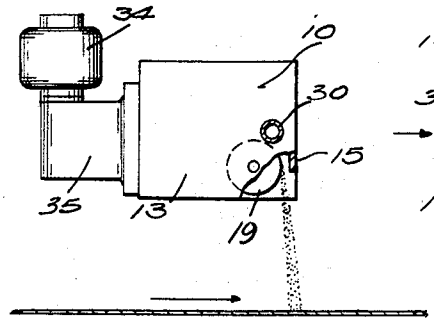


Fig. 1

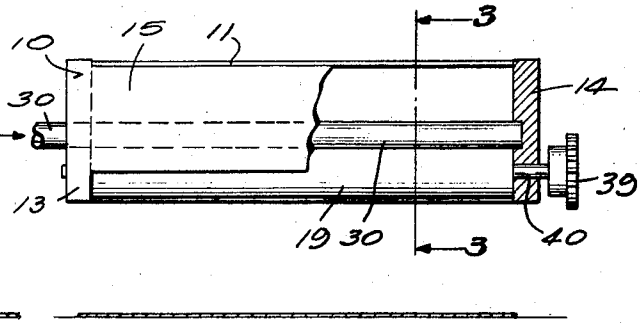


Fig. 2

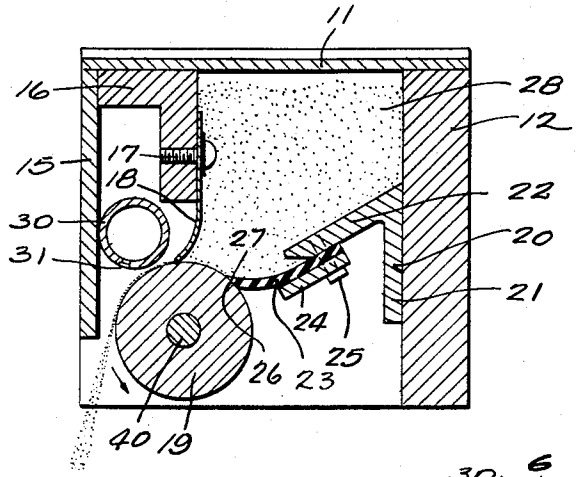


Fig. 3

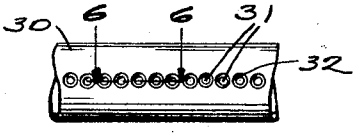


Fig. 5

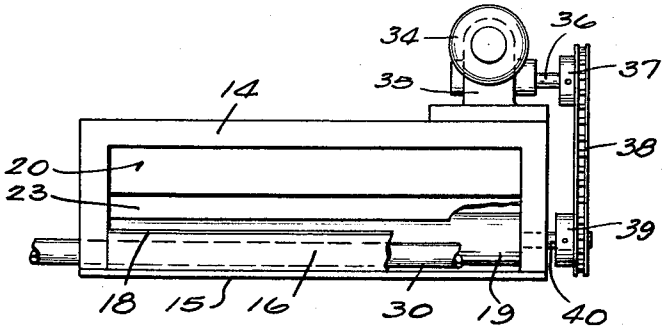


Fig. 4

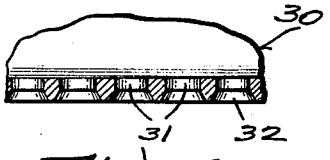


Fig. 6

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POWDER DISPENSER FOR PRINTED WEBS

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1 Claim. (Cl. 222—193)

ABSTRACT OF THE DISCLOSURE

A container disposed above a printed web holding a quantity of powder over a roll which rotates and deposits the powder on the web below, and the container held powder is in contact with the roll between a doctor blade of resilient material and a strip of shim stock set to allow a certain amount of powder to pass between said strip and the roller, and an adjacent apertured tube emitting compressed air to blow said powder against the web.

This invention relates to improvements in powder dispensers for printed webs, and is an improvement on my invention disclosed in a prior application bearing the Ser. No. 453,427, now U.S. Patent No. 3,305,141, and filed in the U.S. Patent Office on May 5, 1965.

An object of the invention is to provide a device of the type which will distribute powder more evenly on a printed web than has been possible with apparatus of the same character in prior use.

Another object of the invention is to provide a compressed air tube having a plurality of aligned air discharge orifices of novel design yielding increased capability in uniformity of powder distribution.

Other and further objects of the invention will appear as the description proceeds, reference being had to the accompanying drawing, in which:

FIG. 1 is an end view partly broken away of a powder dispenser embodying the invention.

FIG. 2 is a front view partly in elevation and partly in section.

FIG. 3 is a cross-sectional view taken on line 3—3 of FIG. 2.

FIG. 4 is a plan view of the device partly broken away.

FIG. 5 is a fragmentary inverted view of the air distribution tube.

FIG. 6 is a cross-sectional view taken on line 6—6 of FIG. 5.

In the drawing, the dispenser **10** has a top **11**, a rear wall **12**, end walls **13** and **14**, and the frontal wall **15**.

A transverse angle member **16** depends from the top **11** and has secured thereto by threaded means **17**, the flexible curvate blade **18**, formed of two thousandths shim stock, which bears against the top of the roller **19**. A second transverse angular member **20** has one portion **21** thereof affixed to the rear wall **12** with the other

portion **22** thereof projecting downwardly at an acute angle, and having subjoined thereto the relatively thick resilient strip **23** retained with a transverse strap **24** thereunder by threaded means **25**.

The free edge **26** of the strip **23** is beveled at **27** and bears against the roller **19**, serving to retain the powder contents **28** prior to its movement under the blade **18** during the rotation of the roller **19**.

A transverse tube **30** is connected with a source of compressed air and has a plurality of aligned apertures **31** longitudinally disposed therein. As shown in FIG. 6, the apertures **31** are exteriorly countersunk as at **32**, resulting in wider diffusion of the projected powder **28**.

The resilient element **23** also serves to remove any accumulation on the roller **19** during the rotation of the latter. The element **18** is set during manufacturing assembly to permit passage on the roller **19** of just the correct amount of powder **28**, and the compressed air emitted through the countersunk apertures **32** will distribute said powder over the printed web **33**.

A motor **34** coupled with a gear reducer **35** operates the shaft **36** provided with sprocket **37** connected by chain **38** with the sprocket **39** mounted on the shaft **40** connected with the roller **19** for rotation of the latter.

Having thus described the invention, it will be understood that the device is capable of many modifications in structure and design, without departing from the spirit of the invention, within the scope of the appended claim.

What is claimed and desired to be secured by Letters Patent of the United States is:

1. A device of the character described including a hopper for powdered material, a roller mounted therein, an elongate angle member within the top of said hopper over said roller, a curvate blade of shim stock fixed to a vertical face of said angle member and bearing against the top of said roller to limit the quantity of powder passing therethrough during rotation of said roller, a resilient strip held in parallel and laterally of said roller, a bevelled free edge thereof bearing against said roller to free it of any accumulation of powder thereon as it rotates, and a compressed air tube disposed above one side of said roller having a plurality of aligned externally countersunk apertures for blowing powder downwardly off said roller onto a web moving thereunder.

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